10

WHAT IS CLAIMED IS:

- 1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence that encodes an amino acid sequence selected from the group consisting of the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:57), Figure 28 (SEQ ID NO:57), Figure 28 (SEQ ID NO:65), Figure 30 (SEQ ID NO:65), Figure 30 (SEQ ID NO:65), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:76), Figure 44 (SEQ ID NO:78) and Figure 46 (SEQ ID NO:78).
- 2. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence selected from the group consisting of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:8), Figure 5 (SEQ ID NO:10), Figure 7 (SEQ ID NO:15), Figure 9 (SEQ ID NO:17), Figure 11 (SEQ ID NO:22), Figure 13 (SEQ ID NO:28), Figure 15 (SEQ ID NO:34), Figure 17 (SEQ ID NO:39), Figure 15 (SEQ ID NO:44), Figure 21 (SEQ ID NO:56), Figure 23 (SEQ ID NO:51), Figure 25 (SEQ ID NO:65), Figure 27 (SEQ ID NO:58), Figure 29 (SEQ ID NO:60), Figure 31 (SEQ ID NO:62), Figure 33 (SEQ ID NO:64), Figure 35 (SEQ ID NO:66), Figure 37 (SEQ ID NO:71), Figure 39 (SEQ ID NO:73), Figure 41 (SEQ ID NO:75), Figure 43 (SEQ ID NO:77) and Figure 45 (SEQ ID NO:79).
- 3. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence selected from the group consisting of the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:8), Figure 5 (SEQ ID NO:10), Figure 7 (SEQ ID NO:15), Figure 9 (SEQ ID NO:17), Figure 11 (SEQ ID NO:22), Figure 13 (SEQ ID NO:28), Figure 15 (SEQ ID NO:34), Figure 17 (SEQ ID NO:39), Figure 19 (SEQ ID NO:44), Figure 21 (SEQ ID NO:49), Figure 23 (SEQ ID NO:51), Figure 25 (SEQ ID NO:56), Figure 27 (SEQ ID NO:58), Figure 29 (SEQ ID NO:60), Figure 31 (SEQ ID NO:62), Figure 33 (SEQ ID NO:64), Figure 35 (SEQ ID NO:66), Figure 37 (SEQ ID NO:71), Figure 39 (SEQ ID NO:73), Figure 41 (SEQ ID NO:75), Figure 43 (SEQ ID NO:77) and Figure 45 (SEQ ID NO:79).
- Isolated nucleic acid having at least 80% nucleic acid sequence identity to the full-length coding sequence of the DNA deposited under any ATCC accession number shown in Table 7.
 - A vector comprising the nucleic acid of any one of Claims 1 to 4.
- The vector of Claim 5 operably linked to control sequences recognized by a host cell transformed with the vector.
 - A host cell comprising the vector of Claim 5.

.4

25

- 8. The host cell of Claim 7, wherein said cell is a CHO cell.
- 9. The host cell of Claim 7, wherein said cell is an E. coli.
- 10. The host cell of Claim 7, wherein said cell is a yeast cell.
- 5
- 11. A process for producing a PRO polypeptides comprising culturing the host cell of Claim 7 under conditions suitable for expression of said PRO polypeptide and recovering said PRO polypeptide from the cell culture.
- 10
- 12. An isolated polypeptide having at least 80% amino acid sequence identity to an amino acid sequence selected from the group consisting of the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:52), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:65), Figure 30 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 40 (SEQ ID NO:75), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:75), Figure 44 (SEQ ID NO:78) and Figure 46 (SEQ ID NO:80).
- 13. An isolated polypeptide scoring at least 80% positives when compared to an amino acid sequence selected from the group consisting of the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:52), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:65), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 40 (SEQ ID NO:76), Figure 44 (SEQ ID NO:78) and Figure 46 (SEQ ID NO:80).
- 14. An isolated polypeptide having at least 80% amino acid sequence identity to an amino acid sequence encoded by the full-length coding sequence of the DNA deposited under any ATCC accession number shown in Table 7.
- 15. A chimeric molecule comprising a polypeptide according to any one of Claims 12 to 14 fused to a heterologous amino acid sequence.
- 35 16. The chimeric molecule of Claim 15, wherein said heterologous amino acid sequence is an epitope tag sequence.

25

30

5

- The chimeric molecule of Claim 15, wherein said heterologous amino acid sequence is a Fc region of an immunoglobulin.
- An antibody which specifically binds to a polypeptide according to any one of Claims 12 to
 .
- The antibody of Claim 18, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.
 - 20. Isolated nucleic acid having at least 80% nucleic acid sequence identity to:
- (a) a nucleotide sequence encoding the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:52), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:65), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:76), Figure 44 (SEQ ID NO:78) or Figure 46 (SEQ ID NO:80), lacking its associated signal peptide;
- (b) a nucleotide sequence encoding an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:52), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:65), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:76), Figure 44 (SEQ ID NO:78) or Figure 46 (SEQ ID NO:80), with its associated signal peptide; or
- (c) a nucleotide sequence encoding an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:46), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:52), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:57), Figure 36 (SEQ ID NO:67), Figure 36 (SEQ ID NO:74), Figure 36 (SEQ ID NO:76), Figure 36 (SEQ ID NO:74), Figure 36 (SEQ ID NO:76), Figure 36 (SEQ ID NO:78), Figure 37 (SEQ ID NO:80), lacking its associated signal peptide.

1.00

- 21. An isolated polypeptide having at least 80% amino acid sequence identity to:
- (a) the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:55), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:65), Figure 36 (SEQ ID NO:
- Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:65), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:76), Figure 44 (SEQ ID NO:78) or Figure 46 (SEQ ID NO:80), lacking its associated signal peptide;
- (b) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:9), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:45), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:50), Figure 26 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:67), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:76), Figure 34 (SEQ ID NO:76), Figure 34 (SEQ ID NO:76), Figure 34 (SEQ ID NO:76), Figure 44 (SEQ ID NO:78), With its associated signal peptide; or
- (c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:19), Figure 6 (SEQ ID NO:11), Figure 8 (SEQ ID NO:16), Figure 10 (SEQ ID NO:18), Figure 12 (SEQ ID NO:23), Figure 14 (SEQ ID NO:29), Figure 16 (SEQ ID NO:35), Figure 18 (SEQ ID NO:40), Figure 20 (SEQ ID NO:55), Figure 22 (SEQ ID NO:50), Figure 24 (SEQ ID NO:57), Figure 28 (SEQ ID NO:59), Figure 30 (SEQ ID NO:61), Figure 32 (SEQ ID NO:63), Figure 34 (SEQ ID NO:57), Figure 36 (SEQ ID NO:67), Figure 38 (SEQ ID NO:72), Figure 40 (SEQ ID NO:74), Figure 42 (SEQ ID NO:76), Figure 34 (SEQ ID NO:76), Figure 34 (SEQ ID NO:78) or Figure 46 (SEQ ID NO:80), lacking its associated signal peptide.